

## Grounds for Traversal

The applicants respectfully submit that the Restriction Requirement is improper for at least two (2) reasons, each of which is separately addressed below.

### ***The Claims of Groups I and II are not Distinct.***

First, the claims of groups I and II are not distinct. Group I includes independent claim 1 which recites:

1. A method for determining the presence or concentration of a substance in a medium, the method comprising:
  - a) providing a sensor in the medium, wherein the sensor includes at least one optical carrier and a microsphere having a surface including receptors for the substance, wherein the receptors are provided substantially at a belt surface area including an equator of the microsphere, and wherein surface areas of the microsphere other than the belt surface area are substantially free of receptors, each of the at least one optical carrier being coupled with the microsphere;
  - b) applying a light source to one of the at least one optical carriers of the sensor;
  - c) detecting light from one of the at least one optical carriers of the sensor; and
  - d) determining a presence or concentration of the substance based on a property of the detected light, wherein the property is based on a shift in resonance of the microsphere.

Group II includes independent claim 10 which recites:

10. A system **for determining the presence or concentration of a substance in a medium,**

the system comprising:

- a) a sensor, for immersion in the medium, the sensor including
  - i) at least one optical carrier, and
  - ii) a microsphere having a surface including receptors for the substance, wherein the receptors are provided substantially at a belt surface area including an equator of the microsphere, and wherein surface areas of the microsphere other than the belt surface area are substantially free of receptors, **each of the at least one optical carrier being coupled with the microsphere;**
- b) a light source for applying light to one of the at least one optical carriers of the sensor;
- c) a detector for detecting light from one of the at least one optical carriers of the sensor; and
- d) **means for determining a presence or concentration of the substance based on a property of the detected light, wherein the property is based on a shift in resonance of the microsphere.**  
[Emphasis added.]

These claims are not distinct.

The Examiner alleges that "the product as claimed can be used in a materially different process of drug delivery to a target, wherein receptors on the microsphere bind to ligands conjugated with a drug, and the microspheres are delivered intravenously to a target." (Paper No. 20050114, page 2.) There is no support for this conclusion.

First, since the microspheres are coupled with the optical carrier(s), they could not, by themselves, be delivered intravenously. Further, even if the

microspheres were delivered intravenously without the optical carrier(s), this might render the claimed "means for determining a presence or concentration of the substance based on a property of the detected light, wherein the property is based on a shift in resonance of the microsphere" inoperable. Furthermore, the applicants believe that one might be reluctant to introduce microspheres, which may be made of amorphous sapphire (See, e.g., claim 15 which depends from claim 10.), into a human body.

In view of the foregoing, the inventions of groups I and II cannot be distinct for the reason alleged by the Examiner. Therefore, the restriction of the claims in these two groups is improper for at least this reason.

***There Would be No Serious Burden on the Examiner to Perform a Patentability Search for the Claims of Groups I II, and III.***

Second, the Examiner alleges that the claims of group I are drawn to an invention classified in class 436, subclass 164, and that the claims of group II are drawn to an invention classified in class 422, subclass 50. The classification definition instructs that for class 436, subclass 164, the searcher is to "SEE OR SEARCH CLASS: ...422 ... subclasses 50+ ... ." Thus, if the Examiner were to examine the claims of group I, it would not be a serious burden to also examine the claims of group II. Indeed, the method claims 1-9 correspond very closely to the system claims 10-18.

Further, the classification definition instructs that for class 422, subclass 50, the searcher is to "SEE

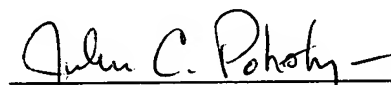
OR SEARCH CLASS: ... 436, ... subclasses 1+ for similar processes." Thus, if the Examiner were to examine the claims of group II, it would not be a serious burden to also examine the claims of groups I and III. Since this shows a lack of serious burden on the Examiner, the restriction is not proper. (See MPEP 803.)

### Conclusions

In view of the foregoing, the applicant respectfully submits that all of the pending claims (i.e., claims 1-35) should be examined, and at a minimum, the claims of group II must be examined with the elected claims of group I.

Respectfully submitted,

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### CERTIFICATE OF MAILING under 37 C.F.R. 1.8(a)

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